Amendments to the Claims:

Listing of Claims - The following listing of claims is to replace all previous listing of claims.

1. (Currently Amended) A method of integrating a scheduling algorithm in a wireless network shared by a plurality of users comprising the step of:

a. generating one or more contention slots;

b. allocating a first number of contention slots according to a request and grant mode, wherein the first number is determined by a number of user access requests, further wherein each one of the number of user access requests corresponds to a different one of the first number of contention slots;

c. allocating a second number of contention slots according to a contention mode;

d. prioritizing the first number of contention slots and the second number of contention slots; and

e. dynamically adjusting the first number of contention slots according to a change in the number of users requesting access.

2. (Canceled)

3. (Previously Presented) The method of claim 1 wherein at least one contention slot is allocated according to the contention mode at all times.

4. (Previously Presented) The method of claim 1 wherein a percentage value is assigned to each of the request and grant mode and the contention mode.

5. (Original) The method of claim 4 wherein the sum of the percentage values is 100%.

6. (Previously Presented) The method of claim 4 wherein the percentage value for each mode present in the wireless network is a dynamically changing value.

7. (Canceled)

8. (Canceled)

9. (Currently Amended) The method of claim 1 wherein each of the generated one or more contention slots ~~is assigned a queue in~~ provides access to a weighted fair queue.

10. (Previously Presented) The method of claim 9 wherein two new contention slots are generated, allocated according to the request and grant mode, and placed in the weighted fair queue when a collision occurs between two users.

11. (Original) The method of claim 10 wherein a starting request is placed in the weighted fair queue when all contention is resolved.

12. (Previously Presented) The method of claim 9 further comprising utilizing the weighted fair queue to adjust the rate of generating the one or more contention slots automatically.

13. (Previously Presented) The method of claim 12 wherein the rate of generating the one or more contention slots increases when the wireless network is lightly loaded.

14. (Previously Presented) The method of claim 12 wherein the rate of generating the one or more contention slots decreases when the wireless network is heavily loaded.

15. (Currently Amended) An apparatus for integrating a scheduling algorithm in a wireless network shared by a plurality of users comprising:

a. means for generating one or more contention slots;

b. means for allocating a first number of contention slots according to a request and grant mode, wherein the first number is determined by a number of user access requests, further wherein each one of the number of user access requests corresponds to a different one of the first number of contention slots;

c. means for allocating a second number of contention slots according to a contention mode;

d. means for prioritizing the first number of contention slots and the second number of contention slots; and

e. means for dynamically adjusting the first number of contention slots according to a change in the number of users requesting access.

16. (Previously Presented) The apparatus of claim 15 wherein at least one contention slot is allocated according to the contention mode at all times.

17. (Previously Presented) The apparatus of claim 15 wherein a percentage value is assigned to each of the request and grant mode and the contention mode.

18. (Original) The apparatus of claim 17 wherein the sum of the percentage values is 100%.

19. (Previously Presented) The apparatus of claim 17 wherein the percentage value for each mode present in the wireless network is a dynamically changing value.

20. (Canceled)

21. (Canceled)

22. (Currently Amended) The apparatus of claim 15 wherein each of the generated one or more contention slots ~~is assigned a queue in~~ provides access to a weighted fair queue.

23. (Previously Presented) The apparatus of claim 22 wherein two new contention slots are generated, allocated according to the request and grant mode, and placed in the weighted fair queue when a collision occurs between two users.

24. (Original) The apparatus of claim 23 wherein a starting request is placed in the weighted fair queue when all contention is resolved.

25. (Previously Presented) The apparatus of claim 22 further comprising means for utilizing the weighted fair queue to adjust the rate of generating the one or more contention slots automatically.

26. (Previously Presented) The apparatus of claim 25 wherein the rate of generating the one or more contention slots increases when the wireless network is lightly loaded.

27. (Previously Presented) The apparatus of claim 25 wherein the rate of generating the one or more contention slots decreases when the wireless network is heavily loaded.

28. (Currently Amended) An apparatus for integrating a scheduling algorithm in a wireless network channel shared by a plurality of users comprising:

a. a hub for transmitting and receiving wireless network signals such that the hub may receive requests and assign portions of a communication bandwidth;

b. a plurality of end user nodes for transmitting and receiving wireless network signals such that a plurality of users may request or be granted a portion of the communication bandwidth; and

c. a weighted fair queue for utilizing an adaptive contention scheduling scheme to generate one or more contention slots, to allocate a first number of contention slots according to a request and grant mode, wherein the first number is determined by a number of user access requests, each one of the number of user access requests corresponds to a different one of the first number of contention slots, to allocate a second number of contention slots according to a contention mode, to prioritize the first number of contention slots and the second number of contention slots, and to dynamically adjusting the first number of contention slots according to a change in the number of users requesting access.

29. (Canceled).

30. (Previously Presented) The apparatus of claim 28 wherein at least one contention slot is allocated according to the contention mode at all times.

31. (Previously Presented) The apparatus of claim 28 wherein a percentage value is assigned to each of the request and grant mode and the contention mode.

32. (Original) The apparatus of claim 31 wherein the sum of the percentage values is 100%.

33. (Previously Presented) The apparatus of claim 31 wherein the percentage value for each mode present in the wireless network is a dynamically changing value.

34. (Canceled).

35. (Canceled).

36. (Currently Amended) The apparatus of claim 28 wherein each of the generated one or more contention slots ~~is assigned a queue in~~ provides access to the weighted fair queue.

37. (Previously Presented) The apparatus of claim 36 wherein two new contention slots are generated, allocated according to the request and grant mode, and placed in the weighted fair queue when a collision occurs between two users.

38. (Original) The apparatus of claim 37 wherein a starting request is placed in the weighted fair queue when all contention is resolved.

39. (Previously Presented) The apparatus of claim 36 wherein the weighted fair queue adjusts the rate of generating the one or more contention slots automatically.

40. (Previously Presented) The apparatus of claim 39 wherein the rate of generating the one or more contention slots increases when the wireless network is lightly loaded.

41. (Previously Presented) The apparatus of claim 39 wherein the rate of generating the one or more contention slots decreases when the wireless network is heavily loaded.

42. (Previously Presented) The method of claim 1 wherein the second number of contention slots is a fixed, predetermined number.

43. (Previously Presented) The method of claim 1wherein the first number of contention slots is prioritized ahead of the second number of contention slots.

44. (Previously Presented) The method of claim 1 wherein new user access requests utilize one of the second number of contention slots allocated according to the contention mode.

45. (Previously Presented) The method of claim 44 wherein if multiple new user access requests cause a collision, a number of additional contention slots are generated according to the request and grant mode, such that the number of additional contention slots corresponds to at least a number of the multiple user access requests causing the collision, thereby increasing the first number of contention slots by the number of additional contention slots.

46. (Previously Presented) The method of claim 1 wherein each of the first number of contention slots is associated with a unique user making a user access request.

47. (Previously Presented) The method of claim 46 wherein if the unique user does not continue to make user access requests, the contention slot associated with the unique user is removed, thereby reducing the first number of contention slots.

48. (Previously Presented) The apparatus of claim 15 wherein the second number of contention slots is a fixed, predetermined number.

49. (Previously Presented) The apparatus of claim 15 wherein the first number of contention slots is prioritized ahead of the second number of contention slots.

50. (Previously Presented) The apparatus of claim 15 wherein new user access requests utilize one of the second number of contention slots allocated according to the contention mode.

51. (Previously Presented) The apparatus of claim 50 wherein if multiple new user access requests cause a collision, a number of additional contention slots are generated according to the request and grant mode, such that the number of additional contention slots corresponds to at least a number of the multiple user access requests causing the collision, thereby increasing the first number of contention slots by the number of additional contention slots.

52. (Previously Presented) The apparatus of claim 15 wherein each of the first number of contention slots is associated with a unique user making a user access request.

53. (Previously Presented) The apparatus of claim 52 wherein if the unique user does not continue to make user access requests, the contention slot associated with the unique user is removed, thereby reducing the first number of contention slots.

54. (Previously Presented) The apparatus of claim 28 wherein the second number of contention slots is a fixed, predetermined number.

55. (Previously Presented) The apparatus of claim 28 wherein the first number of contention slots is prioritized ahead of the second number of contention slots.

56. (Previously Presented) The apparatus of claim 28 wherein new user access requests utilize one of the second number of contention slots allocated according to the contention mode.

57. (Previously Presented) The apparatus of claim 56 wherein if multiple new user access requests cause a collision, a number of additional contention slots are generated according to the request and grant mode, such that the number of additional contention slots corresponds to at least a number of the multiple user access requests causing the collision, thereby increasing the first number of contention slots by the number of additional contention slots.

58. (Previously Presented) The apparatus of claim 28 wherein each of the first number of contention slots is associated with a unique user making a user access request.

59. (Previously Presented) The apparatus of claim 58 wherein if the unique user does not continue to make user access requests, the contention slot associated with the unique user is removed, thereby reducing the first number of contention slots.

60. (Previously Presented) The apparatus of claim 28 wherein the contention slots are prioritized according to a quality of service standard.